

at regular intervals from each other, then the rays, which emerge, and after reflection re-enter the same surface, will also be separated so as to present streaky appearances, in some of which the order of the colours will differ from that in others, agreeably to observation.

With respect to the curvature of the prismatic bows, *that* manifestly depends upon the position of the eye, as the lines of equal incidence form a cone, of which the eye is apex; and, accordingly, as the eye recedes from the prism, the bow becomes less curved, and for a small space will appear straight.

Dr. Herschel having remarked, when a plane surface is applied to a prism, that the appearance of the streaks that are seen in contact with the prismatic bow depends on what he has termed the critical separation of the rays, infers, that those rings of colours which are seen when a lens is laid upon a plane surface, depend also upon the same critical separation; the lens being in this case considered as a prism bent round into a circular form.

The several points of resemblance in the circumstances under which the bow-streaks from a prism, and the rings from contact of lenses, appear or disappear, or change their form or their colours, are next compared; and are considered by the author as decisive proof that each arise from the same critical separation at the boundary of prismatic reflection; and if the mere difference of refrangibility of the several colours is sufficient to account for the phenomena, it is inferred, that no alternate fits of easy reflection and easy transmission really exist as original properties in the rays of light.

*An Account of a Calculus from the Human Bladder of uncommon Magnitude.* By Sir James Earle, F.R.S. Read June 15, 1809. [*Phil. Trans.* 1809, p. 303.]

This calculus, which is considered as the largest on record, weighs 44 ounces avoirdupois. It was taken after death from the bladder of Sir James Ogilvie, who had submitted to a fruitless attempt to remove it by the usual operation of lithotomy, rather than prolong an existence extremely miserable from this among other consequences of a blow on his back thirty years before. The stone so completely filled the cavity of the bladder, that it was with difficulty taken out, although there was no real adhesion. Its texture was less compact than that of calculi in general, but agreed in appearance with that species which has been called the Fusible Calculus; and it was ascertained by Dr. Powel to contain the same ingredients as it was composed of, the ammoniacal phosphate of magnesia, with phosphate of lime.

*On expectorated Matter.* By George Pearson, M.D. F.R.S. Read June 15, 1809. [*Phil. Trans.* 1809, p. 313.]

Dr. Pearson's inquiry comprehends several varieties of expectorated matter, which he arranges under the following heads: